苏州大学 软件测试与质量保证 期末试卷（A）卷　　共 2 页

考试形式 开 卷 2022 年 12 月

1. Suppose that you are a tester, your company is going to release a new version of a game, how do you perform the acceptance testing?　(8’)

2. Draw a graph to analyze white-box coverages relationship, including logic coverages and date-flow coverages.　(8’)

3. Given the following parameters and values, design the test cases by **pair-wise** combinational testing.　(8’)

Operating system	**Browser**	**Network access**
Windows	IE	Wi-Fi
Mac OS	Chrome	4G
Linux	Safari	5G

4. What is MTTF? Given the failures recorded, calculate the MTTF for March.　(8’)

Month	**Dates**
January	2nd, 7th, 15th, 26th
February	10th,13th,21st
March	4th,18th,22nd,25th
April	3rd, 9th, 11th, 24th

5. Given the following relationship between testing requirements and test cases, perform test suite minimization by Greedy/ Additional Greedy/ GE /GRE strategy.　(8’)

	r1	r2	r3	r4	r5	r6
t1	X					
t2		X	X	X		
t3	X		X		X	X
t4		X				
t5			X	X	X	X
t6					X	X

6. Given the requirements of **Next2day Problem**: the inputs are three integers: month, day, year and the output is the Next2day of the input. For example, the input is Dec 13, 2022, the output is Dec 15, 2022. The inputs must satisfy the following conditions:

C1: 1<= month <= 12 C2: 1<= day <= 31 C3: 1900<= year <= 2100

If any of the above conditions is failed, it will print an error message：The input is out of range.

(1) List the valid equivalence classes for the three inputs；
(2) List all condition stubs and action stubs, calculate the number of rules;
(3) Design the **extended entry decision table**. (20')

7. Here is a vending machine for drink that can receive 50 cents coin. If you insert 50 cents and press the button of *Coke* or *Coffee* or *Tea*, then you will receive the drink. If you insert 1 dollar and press the button, then you will receive the drink and the change of 50 cents.

(1) List the causes, effects and intermediate nodes if necessary.
(2) Draw the cause-effect graph.
(3) Develop **extended entry decision table** from graph. (20')

8. Given the requirements for calculating life insurance premiums: The insurance rate depends on the points, and the points depend on Age, Sex, Marital status and Family size. More information can be found in the following table:

Age			Sex		Marital status		Family size
20~39	40~59	Others	M	F	Married	Single	One person for -0.5 points, up to -3 points.
6 points	4 points	2 points	5 points	3 points	3 points	5 points	

Note：

(1) Age：a non-zero integer from 1 to 99
(2) Sex：a single English character, should be "M" for "Male" or "F" for "Female"
(3) Marital status：a string, should be "Married" or "Single"
(4) Family size：blank or a non-zero integer from 1 to 9

Design the test cases by applying **BVA and EP** methods. (20')